

NEW OR RARE MICROFUNGI.

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F.L.S.

Mr. Ramsbottom's departure for Salonika to assist in the military hospitals has prevented him from joining in the final revision of these pages for the press. As in previous years we have to thank Mr. D. A. Boyd for the very valuable material he has sent. The new genus of Discomycetes, *Discocera*, was discovered by W. Watson while collecting lichens. Our special thanks are due to him for sending us such an interesting plant.

PHYCOMYCETES.

Rhizophidium acuforme (Zopf) Fisch. Rabenh. Krypt. Fl.
1. 4, p. 93, 1892.

Sporangia of the host cell sometimes seated on stalks, often crowded in groups of 1-10, globose or lemon-shaped 6-16 μ diam., with a short apical papilla, and at the base, a slender branched minute rhizoid. Zoospores minute, 2 μ in diam., globose, with minute oil-drops and one cilium. Resting spores smaller than the sporangia, globose, with a large oil-drop almost filling the cells.

On *Chlamydomonas intermedia* in a cart-rut at Harborne, April 1917. Coll. W. B. Grove. (New Phytologist xvi. pp. 177-80 (1 fig.) 1917).

PYRENOMYCETES.

Melanospora lagenaria Fuck.

Already recorded for Britain (Trans ii. p. 93, 1905). It has been found by D. A. Boyd at Eglinton, Ayrshire, Aug. 1917. The perithecia are mostly in groups; the spores are slightly larger than the size given, measuring about 16 \times 7 μ . It grew on *Polystictus versicolor* along with *Hypomyces aurantius*.

Chaetomium pannosum Wallr. Flora Crypt. Germ. 11. p.
267, 1833.

Perithecia solitary or generally in crowded groups, ellipsoid, up to 0.5 mm. high, 0.3-4 mm. thick, with a short

colourless ostiole. Rhizoidal hyphæ abundant. Lateral hairs of the perithecium tapering, brown, incrustated; terminal hairs spreading, branched, very stiff, the cell walls thick, incrustated, brown. Asci large, clavate, stalked, up to $100\mu \times 15\text{--}20\mu$ 8-spored; spores ellipsoid (side view fusiform) apiculate at each end, olive-brown, $10\text{--}14\mu \times 8\text{--}9\mu$.

On decaying branches and stalks of herbaceous plants. The above fungus was found by Miss Winifred Page on a culture mixed with dung solution at Birckbeck College. Feb. 1918.

DISCOMYCETES.

DISCOCERA gen. nov.

Ascomata parasitica, sessilia, immarginata, colorata, firme ceracea; disco patellato, dein plano-convexo. Asci clavati, supra rotundati, inoperculati, 8-sporei; paraphyses tenerae, supra ramosissimae, epithecium densum formantes; Sporae ellipsoideae, continuae, hyalinae.

A somewhat remarkable genus resembling *Humaria* in the appearance of the large smooth spores, but the inoperculate asci and the branching of the paraphyses to form a dense epithecium show its affinity with the lichenicolous genus *Nesolechia*.

D. LICHENICOLA n. sp.

Ascomatibus subrotundatis, usque ad 1.5 mm. latis, fusco-coccineis, glabris. Ascis elongato-clavatis c. $140\mu \times 20\mu$, membranis ad apices c. 12μ crassis, cum iodo vino-rubescens; paraphysibus tenerrimis, c. 1μ crassis, septatis, supra persaepe ramosis, interdum irregulariter nodosis, hyalinis, granulosis, ad basim coalitis; sporis glabris, intus roseo-hyalinis, guttulatis $20\text{--}26\mu \times 10\text{--}13\mu$.

Ad thallum Lichenis, supra saxa. Coll. W. Watson at Treborough, Somerset, Dec. 1915.

The fungus is a dark crimson-red when dry, but when moistened becomes lighter in colour, and, under the microscope, the whole ascus contents, more especially the spore guttulae, are a beautiful rose-red.

SPHAEROPSIDAEAE.

Phyllosticta fuchsiiicola Speg. Fungi Chil. p. 138, 1910; Sacc Syll xxii. p. 839, 1913.

Spots whitish, orbicular, on both sides of the leaf 1.5 mm. across, determinate and bordered by a wide purple line. Pycnidia few, innate, lentiform, minute, $75\text{--}90\mu$ diam.,

ostiolate, membranaceous; spores colourless, subcylindrical-ellipsoid, $4-6\mu \times 1.5-2\mu$.

On living leaves of *Fuchsia coccinea*.

Recorded by Spegazzini from Chili. A specimen corresponding to the above has been found by Mr. D. A. Boyd at West Kilbride, Ayrshire, on the dead bark of *Fuchsia* stems. There is a difference of habitat (on stems instead of leaves) and no specialized spots, but the similarity is otherwise very close.

Ascochyta Papaveris Oudem. Contr. Fl. Myc. Nowaja Senilaja p. 12, l.i., fig. 10, 1885; Sacc. Syll. x. p. 301, 1892.

Pycnidia scattered over the surface of the leaves, black, small, 200μ diam., the peridium membranaceous, of rather large fuliginous cells; spores broadly fusiform or sub-ellipsoid, hyaline, 1-septate, $9\mu \times 3.5\mu$.

On leaves of *Papaver nudicaulis* in the island of Nova Zembla. Specimens have been collected by D. A. Boyd on the leaves of *Dicentra spectabilis* which agree fairly closely with the above description. The pycnidia are scattered or congregate from 135μ to 170 in diam., with a minute pore about 35μ diam. The spores are fusiform or sub-ellipsoid and measure $8-12\mu \times 2-3\mu$.

Septoria Scillae Westend. in Kickx Fl. Crypt. Flandres I. p. 423 (1867).

Leaf spots pale-brown. Pycnidia semi-immersed, brownish, becoming darker, about 200μ in diam; spores long, cylindrical, straight or slightly bent, $50-75\mu \times 2.7\mu$; 5-7 irregularly septate, colourless.

On leaves of *Scilla nutans*.

Coll. by D. A. Boyd, May, 1917 at West Kilbride, Ayrshire.

Kickx describes the pycnidia of his species as brown. Allescher has recorded them as black. They became darker with age but so far I have not seen any black specimens.

S. violae-palustris Died. Krypt. fl. Mark Brandenb. ix. p. 522, 1914.

Leaf spots at first very small, round, later up to 4 mm. across, thin, transparent, surrounded by a thickish, reddish-brown line. Pycnidia epiphyllous, numerous, semi-immersed, the upper surface composed of darker cells, and about $75-90\mu$ wide with a pore about 12μ wide, Spores

filiform, indistinctly guttulate, straight or bent, $25-40\mu \times 1-1.2\mu$.

On leaves of *Viola palustris*.

Collected by D. A. Boyd on fading leaves of *Viola palustris* at Ardrossan, Ayrshire Aug. 1916. The fungus agrees wholly with that described by Diedicke though some of the spores from the Ardrossan specimen are slightly longer.

S. Chenopodii Westend. Bull. Acad. Roy. Belg. 1851, p. 396; Sacc. Syll. iii. p. 556.

Var. *emaculata* Grove in Journ. Bot. lv. p. 348, 1917. Pycnidia occurring on stems without distinct spots.

On living plants of *Atriplex* and *Chenopodium*.

S. Oenanthis Ell & Ev.

This species was previously found by D. A. Boyd on *Oenanthe* leaves in Cumbrae and at Ardrossan (Trans. v. p. 245, 1916). He now sends further specimens from West Kilbride, which occurred in a damp wood on the stems of the host, and which were causing the death of the plants. In these stem pycnidia, the spores measure up to about 48μ in length but do not otherwise differ from those on the leaves.

Camarosporium Stephensii Sacc. Syll. iii. p. 469, 1884.
Hendersonia Stephensii B. & Br. Not. Brit. Fungi n. 502 in Ann. Mag. Nat. Hist. vii. p. 95, 1851.

“Perithecia irregularly seriate under the brown epidermis, bursting in a wide line; spores large, ovoid, reticulately cellular.

On dead stems of *Pteris aquilina*, Bristol.”

This fungus has not again been recorded and the description is somewhat indefinite, but one found by D. A. Boyd is evidently the same:—the pycnidia have a thin, dark brown cellular wall and measure about 300μ across. The spores on short colourless sporophores are as described by Berkeley and Broome: they are divided by three stout transverse septa and the compartments are irregularly divided again by longitudinal and transverse delicate walls; they measure about $45\mu \times 20\mu$ and become browner with age.

Collected by D. A. Boyd on stems of *Pteris aquilina*. Cumbrae, Buteshire, June 1915.

MELANCONIACEAE.

Myxosporium lanccola Sacc. & Roum. Rev. Mycol. 1884, p. 36.

Acervulae gregarious, like tubercles, bursting the epidermis, flesh coloured, with a darker base, white above; spores elongate, fusiform, guttulate, colourless, 20-22 μ long (or shorter), about 4 μ thick; sporophores rod-like, half the length of the spores.

On dead bark of *Quercus Robur*. D. A. Boyd, Stevenston, Ayrshire, Sept., 1917.

M. pubescens Sacc. Syll. x. p. 465, 1892.

Acervulae roundish, pale coloured; spores blunt at the ends, straight or slightly bent, mostly filled with guttulae. Sporophores (?) one-celled, in the mature fungus projecting like hairs.

On dead bark of *Tilia*. Coll. D. A. Boyd, West Kilbride, Ayrshire, May, 1917.

The size of the spores is not given in the original diagnosis. In Mr. Boyd's specimens they are oblong, rounded at the ends and full of small guttulae, they measure about 15 \times 7 μ . The projecting filaments are not present.

AMPHICHAETA Mac Alp. Proc. Linn Soc. N. S. Wales 1904 p. 118; Sacc. Syll xviii. p. 486, 1906.

Acervulae subcutaneous, often erumpent, disciform or pulvinate. Conidia elongate, 2-pluriseptate, become partly coloured, 1-ciliate, at each end.

A. EUROPAEA Grove in Journ. Bot. lx. p. 136, 1917.

On thick dead shoots of *Vitis vinifera*, King's Cliffe, (Berkeley, 1851). In Kew herbarium.

Leptostromella pteridina (Sacc. et Roum. Mich. ii. p. 353, 1880-82); Sacc. Syll. iii. p. 660, 1884.

Pycnidia elongate, applanate, 1-1.5mm. long, immersed then subsuperficial, not sulcate; spores filiform, acicular, colourless, 5-6-septate, 80 μ \times 1.5 μ .

On stems of *Pteris aquilina*. West Kilbride, Ayrshire, May, 1917. Comm. D. A. Boyd.

In Mr. Boyd's specimen the spores measure about 50 μ to 75 μ . None have been seen up to 80 μ in length, and usually they are between 50 and 60 μ . There seems however no reason to doubt that the specific determination is justified.

Libertella blepharis A. L. Sm.

Described in Trans. i. p. 155, 1900 on branches of *Prunus cerasus* and *Pyrus malus*, collected by D. A. Boyd in Ayrshire. It has been again found in Ayrshire at Stevenston, also by Mr. Boyd, on branches of *Crataegus oxyacantha*. It is characterized by the strongly falcate spores measuring up to 40μ in length.

AMEROSPORIUM PATELLARIOIDES n. sp.

Pycnidii superficialibus, subsphaericis vel ellipsoideis ca. 7mm. long. tandem siccis collabescendo patellaribus, atro-brunneis, sparse pilosis; pilis erectis, septatis, brunneis $250\mu \times 10\mu$, Apice obtusis et subhyalinis, sporophoris gracilibus, ramosis; sporis cylindraceo-fusiformibus $8-10\mu \times 2\mu$.

In foliis dejectis *Rosae caninae*. Coll. D. A. Boyd, Kilwinning, Ayrshire, Jan., 1916.

The peridium is composed of rusty-brown, strong-walled cells. The whole pycnidium is swollen when moist, and collapses to a concave form when dry. It is possible that the above may be identical with *Amerosporium chaetostroma* (Berk. and Br.) Sacc. But there is no specimen of this fungus either in the herbarium of the British Museum or at Kew. Miss Wakefield has kindly given dimensions from *A. macrotrichum* (Berk. and Br.):—hairs varying from 230μ to $810\mu \times 12-15\mu$ and spores lunate-fusiform, $5-6\mu \times 5\mu$.

HYPHOMYCETES.

RAMULARIA UMBROSA n. sp.

Maculis purpureo-brunneis, effusis, magnam partem foliorum necantibus; caespitulis minutis, gregariis, epiphyllis; conidiophoris e base brunneolo parenchymatico ortis, dense fasciculatis, simplicibus, parum flexuosis, saepe subgeniculatis et dentatis, sursum attenuatis vel obtusis; ca. $25\mu \times 4\mu$; conidiis cylindraceo-ellipsoideis, interdum catenulatis, simplicibus, hyalinis, $10-16\mu \times 2\mu$.

In foliis vivis *Saxifragae umbrosae*. D. A. Boyd, West Kilbride, Ayrshire, May, 1917. A hypophyllous species *R. Saxifragae* Syd. has been described, which differs in the characters of the fertile tufts as well as in their position on the leaf.

Zygodesmus fulvus Sacc. Mich. II. p. 147, 1880-82.

Recorded by W. B. Grove in Journ. Bot. lv. p. 136, 1917, from Lyndhurst, Hants, collected by Dr. J. S. Bayliss Elliott.

Stemphylium macrosporoideum Sacc. Syll. iv. p. 519, 1886.

Epochnium macrosporoideum B. & Br. Not. Brit. Fig. n. 131 (t. 8, fig. 14) in Ann. Mag. Nat. Hist. Ser. I. 1., p. 263, 1838.

On Plaster of Paris disc on which *Saccharomyces* had been grown for sporulation; W. J. Hodgetts. Recorded by W. B. Grove in Journ. Bot. lv. p. 136 (i. fig.), 1917.

Stysanus microsporus Sacc. Mich. I. p. 274 (1878).

Gregarious, grey then brown. Stem thread-like, formed of brown almost continuous hyphæ, the head clavate; conidia in chains almost globose, hyaline (purplish-brown in the mass), 2-4 μ long, 2-2.5 μ thick. On decaying wood, or herbaceous stems, &c.

Collected by W. N. Cheesman on decaying wood at Selby, Yorkshire, Sept., 1917.

There is in the specimen a rich production of conidia, so that the heads (in the protected specimen) had become overweighted, split up and fallen apart in tripartite lobes. The stems are very slender and black, the heads a delicate purplish brown.

VOLUTELLA LONGEPILA n. sp.

Sporodochiis subsessilis, hemisphericis, albidis, parvis, 250 μ -350 μ latis, margine ciliatis; setis longis, hyalinis, cylindræis, levibus, septatis, apice obtusis vel sensim attenuatis, usque ad 650 μ longis, 8 μ latis; conidiophoris dense congestis, gracilibus ca. 40 μ ad 70 μ longis; conidiis hyalinis, ellipsoideo-cylindræis, 5-7 μ \times 1-2 μ .

Hab. In ramulis dejectis *Ulicis europæi*, Ardrossan, Ayrshire. Collected by D. A. Boyd, Feb., 1913.

The species is characterized by the long smooth cilia and by the small spores.

UREDINEÆ.

Puccinia longissima Schröt in Cohn's Beitr. iii. p. 70, 1883; Grove in Journ. Bot. lv. pp. 135-6 (1 fig.), 1917.

On *Koeleria cristata*, near Aberdeen.

Hitherto put doubtfully under *P. paliformis* Fuck.